



Best Management Practices for Construction and Development Projects

Geocarpon

Geocarpon minimum

Common name • Geocarpon

Scientific name • *Geocarpon minimum*

Federal status • Threatened

State status • Endangered

Purpose and Use

The information in this document is to be used to help avoid and minimize species impacts due to construction practices. It is not intended as a guide to manage habitat for a given species. Please contact the Department of Conservation if habitat management information is needed. Because every project and location differ, following the recommendations in this document does not guarantee impacts will not occur to the species and additional information may be required in certain instances. Following the recommendations in this document does not complete Endangered Species Act consultation that may be necessary for species listed under the federal Endangered Species Act; please contact the U.S. Fish and Wildlife Service for more information.

Ecology

Geocarpon is a small succulent plant that grows $\frac{3}{4}$ to 1 inch tall. It is an annual that germinates in November and overwinters as a tiny rosette. Plants bloom the following spring from mid-March to early May, and expire 4 - 6 weeks later, after seed set. Geocarpon grows on Channel Sandstone glades and outcrops in shallow sandy depressions, where deeper rooted plants cannot persist. In Missouri, Geocarpon is found in Dade, Polk, Greene, Cedar, Lawrence, Henry, and St. Clair counties.

Reasons for Decline

Geocarpon is threatened by conversion of glade habitat to non-native species such as cool season pasture grasses. Grazing may lead to nitrification of the sandy depressions and crowding out by other species. Woody invasion of glades and accumulation of leaf litter can also have detrimental effects on Geocarpon. Excessive offroad vehicle use is also a threat, causing destruction of plants during the early spring growing season.

Specific Recommendations

Projects planned within the seven-county Missouri range of Geocarpon should include a review of affected areas for the presence of Channel Sandstone exposure. If found, these habitats should be surveyed for Geocarpon between March 1 and June 1.

- Maintain native vegetation on sandstone glades by cutting to control woody invasion and by prescribed burning.
- Avoid herbicide use on glades except during the period of July through September when Geocarpon exists only as a seed bank. Monocot specific herbicides may be applied through spot application at other times.
- Limit construction activities to deeper soil areas, away from sandstone exposures.
- Avoid heavy use of glades by grazing livestock, although some level of periodic disturbance should benefit Geocarpon.

General Recommendations

If your project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or the [Missouri Department of Transportation Environmental Studies webpage](#) for additional information on recommendations.

Information Contacts

For further information regarding regulations for development in rivers and streams, contact:

For species information:

[Missouri Department of Conservation](#)
Science Branch
P.O. Box 180
Jefferson City, MO 65102-0180
Telephone: 573-751-4115

For species information and Endangered Species Act Coordination:

[U.S. Fish and Wildlife Service](#)
Ecological Services
101 Park Deville Drive, Suite A
Columbia, MO 65203-0007
Telephone: 573-234-2132

For Clean Water Act Coordination:

[Missouri Department of Natural Resources](#)
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102-0176
Telephone: 573-751-1300, 800-361-4827

U.S. Army Corps of Engineers

Regulatory Branch
700 Federal Building
Kansas City, MO 64106-2896
Telephone: 816-389-3990

U.S. Environmental Protection Agency

EPA Region 7 Water Division
11201 Renner Boulevard
Lenexa, KS 66219
Telephone: 913-551-7977

Disclaimer

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from state and federal agencies, contractors, and others to provide guidance to those who wish to voluntarily act to protect wildlife and habitat. Compliance with these Best Management Practices is not required by the Missouri wildlife and forestry law nor by any regulation of the Missouri Conservation Commission. Federal laws such as the Clean Water Act and the Endangered Species Act, and state or Local laws need to be considered for construction and development projects and require permits and/or consultation with the appropriate agency. Following the recommendations provided in this document will help reduce and avoid project impacts to the species, but impacts may still occur. Please contact the appropriate agency for further coordination and to complete compliance requirements.